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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,348	08/14/2001	Takanobu Noguchi	Q65688	6677

7590 12/15/2003

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Washington, DC 20037-3213

EXAMINER

YAMNITZKY, MARIE ROSE

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

0010

Office Action Summary

Application No.

09/928,348

Applicant(s)

NOGUCHI ET AL.

Examiner

Marie R. Yamnitzky

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. This Office action is in response to applicants' amendment filed October 09, 2003 (Paper No. 9), which amends the specification and claim 1, and cancels claim 2.

Claims 1 and 3-7 are pending.

2. The rejection under 35 U.S.C. 112, second paragraph, as set forth in Paper No. 7, is overcome by applicants' amendment.

The rejections under 35 U.S.C. 102(e) and 103(a) based on Pei (US 2002/0193551 A1), as set forth in Paper No. 7, are overcome by applicants' amendment.

The rejection under 35 U.S.C. 103(a) based on Shi et al. (US 6,329,086 B1), as set forth in Paper No. 7, is overcome by applicants' amendment.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3-7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reisch et al. in *Macromol. Chem. Phys.* Vol. 200, No. 3 (1999), pp. 552-561, for reasons of record in Paper No. 7.

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5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1 and 3-7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3 and 6-15 of U.S. Patent No. 6,521,359

B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because embodiments of the present claims in which X represents $-\text{SiR}_3\text{R}_4-$ are covered by the patented claims.

7. Applicants' arguments filed October 09, 2003 have been fully considered but they are not persuasive with respect to the obviousness-type double patenting rejection and the rejection based on the Reisch reference.

The obviousness-type double patenting rejection is maintained because of the overlapping subject matter where X represents $-\text{SiR}_3\text{R}_4-$.

With respect to the Reisch reference, applicants argue that Reisch does not disclose a close structural homolog of the claimed polymer. Applicants further argue that Reisch leads

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away from the presently claimed invention in teaching that mono-substituted PPV has poor solubility. Applicants argue that applicants' invention attains good solubility in even a mono-substituted polymer while Reisch teaches away from mono-substituted polymers.

It is the examiner's position that Reisch's polymers 11c and 11e are homologs of polymers within the scope of the present claims in which Ar₂ represents an aryl group (specifically, a phenyl group) substituted with an alkyl group having 5 to 20 carbon atoms, Reisch's polymers 11c and 11e being polymers in which Ar₂ represents a phenyl group substituted with an alkyl group having 4 carbon atoms. Prior art polymers 11c and 11e differ from polymers within the scope of the present claims only in that the alkyl substituent on the aryl group corresponding to Ar₂ is one carbon smaller in the prior art polymers than the smallest alkyl substituent encompassed by the present claims. However, even if Reisch's polymers 11c and 11e are not true homologs of polymers within the scope of the present claims, prior art structures do not have to be true homologs or isomers to render structurally similar compounds *prima facie* obvious. *In re Payne*, 606 F.2d, 303, 203 USPQ 245 (CCPA 1979).

Applicants' arguments regarding mono-substitution, di-substitution, and solubility are not persuasive because the present claims are not limited to mono-substitution and are silent with respect to the solubility of the polymer. While Ar₁ must carry at least one substituent, Ar₁ may carry a plurality of substituents, thus encompassing di-substituted polymers similar to Reisch's polymers 1a-1e.

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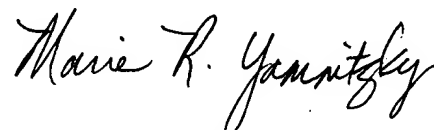
8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (703) 308-4413. (On or about December 30, 2003, the examiner's telephone number will be changed to (571) 272-1531.) The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax numbers for Art Unit 1774 are (703) 872-9306 for all official faxes. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (703) 872-9041. On or about December 30, 2003, the examiner's fax number for unofficial faxes will be changed to (571) 273-1531.)

MRY
December 11, 2003



MARIE YAMNITZKY
PRIMARY EXAMINER

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